Quadratics (7) Simplifying Algebraic

Do now

Factorise	Factorise
$x^2 - 7x - 60$	$x^2 + 10x + 25$
Factorise	Factorise
$x^2 - 16$	$12x^2 - 300$
Solve by factorising	Solve by factorising
$x^2 + 5x - 14 = 0$	$x^2 + 6x + 9 = 0$

Quadratics (7) Simplifying Algebraic

Factorise
$$x^2 - 7x - 60$$

$$(x - 12)(x + 5)$$

Factorise
$$x^2 + 10x + 25$$

$$(\chi < 5)$$

Factorise
$$12x^{2} - 300$$

$$12(\pi^{2} - 25)$$

$$12(\pi^{2} + 5)(\pi^{2} - 5)$$

Solve by factorising
$$x^{2} + 5x - 14 = 0$$

$$(x + 7)(x - 2) = 0$$

$$x + 7 = 0$$

$$x - 2 = 0$$

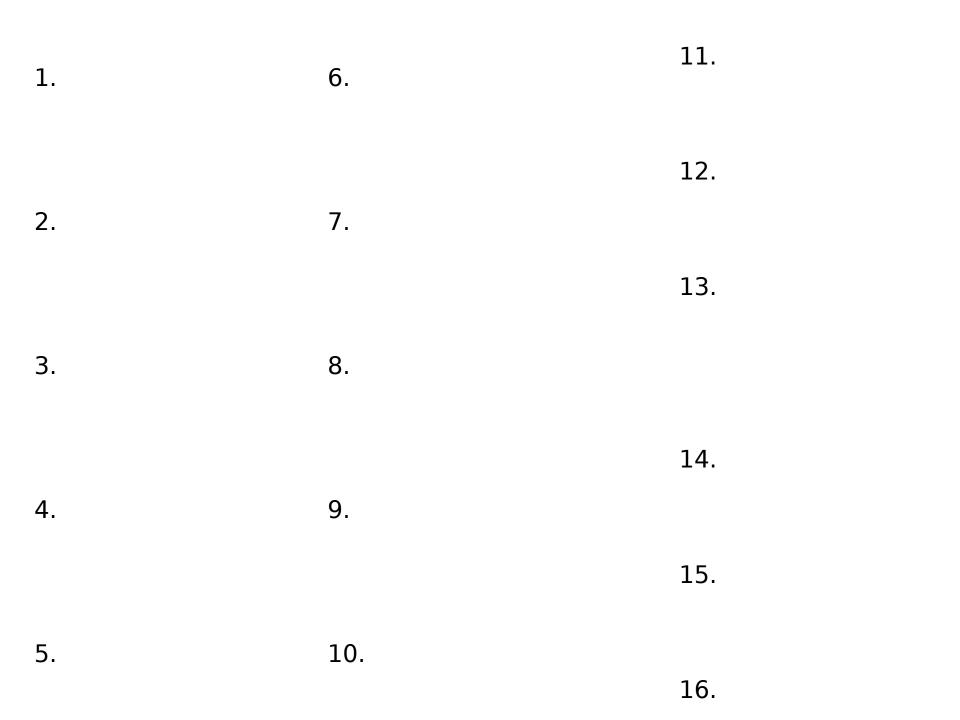
$$x = -7$$

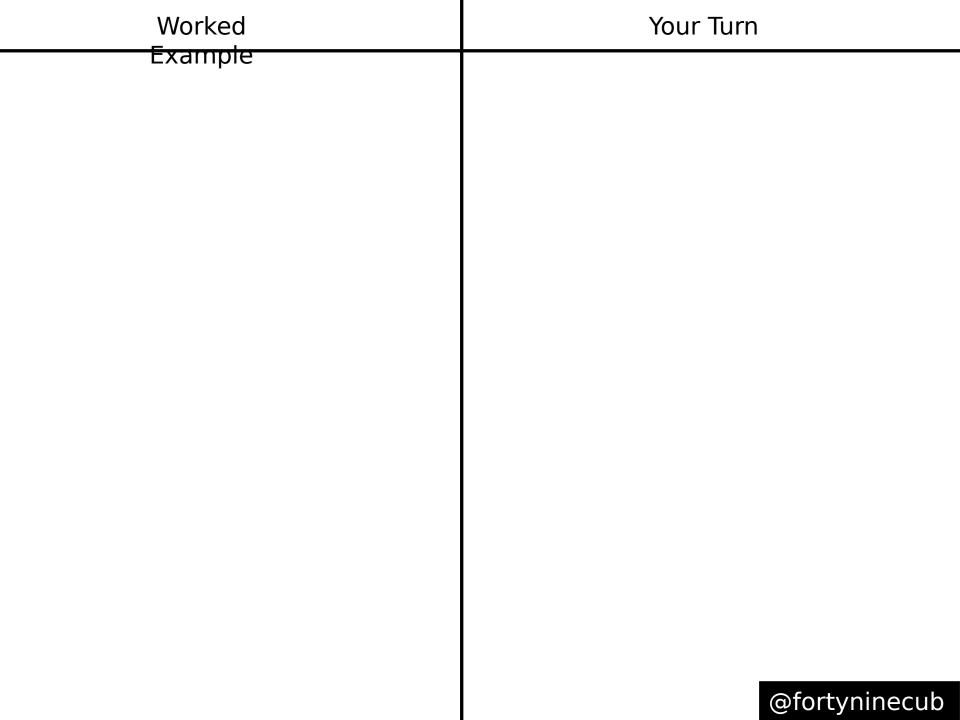
$$x = 2$$

Solve by factorising
$$x^{2} + 6x + 9 = 0$$

$$(x^{2} + 3)^{2} = 0$$

$$(x^{2} + 3)^{2} = 0$$





1.	8.
2.	9.
3.	10.
4.	11.
5.	12.
6.	13.
7.	14.

Extensions

$$1. \ \frac{x^3-x}{x^2+xy+x+y}$$

- 2. Find an expression for the gradient of the line joining the point A (-5,25) to point B (6p, 36p²)
- Work out the value of r when S = 10a

$$S = rac{a}{1-r}$$

4. I can run a fixed length race in two hours at a speed of $x^2 - 1$ mph. If I run at x + 1mph, how long will it take. Give your answer in terms of x in the simplest form.

Extensions

$$1. \frac{x^{3}-x}{x^{2}+xy+x+y} = \frac{\pi(\pi^{2}-1)}{\pi(\pi^{2}+1)+\pi(\pi^{2}+y)} = \frac{\pi(\pi^{2}-1)}{\pi(\pi^{2}+y)+\pi(\pi^{2}+y)} = \frac{\pi(\pi^{2}-1)}{\pi(\pi^{2}-1)}$$

- Find an expression for the gradient of the line joining the point A (-5,25) to point B (6p, 36p²)
- Work out the value of r when S = 10a

$$S = \frac{a}{1 - r} \qquad |O_a| = \frac{q}{1 - C}$$

$$m = \frac{36p^{2}-25}{6p^{2}-5} = \frac{(6p-5)(6p+5)}{6p+5} = 6p-5$$

$$1-r = \frac{a}{10a} \qquad r = 1-\frac{1}{10}$$

eed of
$$x^2 - 1$$
mph. If I run at $x + 1$ mph, how

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long will it take. Give your answer in terms of x in the simplest form.

$$S = \frac{d}{dx} \implies d = st \implies d = 2(n^2 - 1) \implies S = \frac{d}{dx} + \frac{d}{dx} = \frac$$